

Specification for Electrofishing Boat, Electrofisher, Outboard Motor, and Trailer meeting the following minimum requirements

Boat

Hull Style:	Extra Heavy Duty V-hull designed for white water conditions; 16 degree angle at stern and 40 degrees at bow
Length:	21 ft. - 10 in.
Width/Beam:	96 in.
Side Height:	30 in.
Transom Height:	25 in.
Aluminum Gauge:	0.190 in. Bottom, 0.125 in. Side; 5356 material
Weight:	3,100 lb.
Draft:	10 in. (540 lb./in.)
Max Payload:	2,450 lb.
Livewell Capacity:	90 gal.
Fuel Capacity:	50 gal.

Boat Hull shall have all-welded seams and a formed chine that overlays the double welded bottom seams. Transoms shall be designed to resist damage in and out of water. Closed-cell spray-in flotation shall be installed along both sides with appropriate flotation below the deck line.

Livewell shall be a 90 gallon flow through system with a 25gpm main fill pump and an 8 gpm industrial secondary pump and recirculation system with aerating dome. Shall have 2 full size reinforced lids that fold flush with the tank sides. Shall have full interior night time lighting. Shall have recirculation nozzles in all 4 corners with a 1-1/2 inch drain that empties fully at rear of boat.

Forward Work Deck shall be below the gunwale and measure 86 inches wide by 48 inches long with a 42 inch high railing constructed of 1 inch sch. 40 aluminum coated with Linex bedlinering. Shall have 2 full length, LED lit footswitches to control the electrofisher. There shall be two 12VDC receptacles; one each on either side of the work deck. Shall be a dry storage compartment with locking marine doors located beneath the work deck.

Electrofisher and operator controls shall be integrated into a center console. The console shall contain a patch panel to allow for complete selection of anode/cathode boom configurations and shall hinge forward allowing access to all steering controls, switches, circuit breakers, and wiring terminals for the entire electrical system. Steering and control console shall include the following:

- Wheel Steering
- Side mounted outboard controls
- Fuel gauge
- 12 VDC acc. Power plugs
- Hour meter
- Dual electric horns
- Shatterproof windshield
- Lowrance Elite-3X Fish/Depth finder, OR EQUAL
- Voltmeter
- Battery switch
- Heavy duty canvas cover

Boat shall be equipped with a complete system of 12VDC, IP68 rated, 50,000 hour life, white colored LED lighting to include the following:

- Quantity of four, 24inch long work light bar lights located port and starboard towards bow of boat and one each port and starboard on the flat bow; Each shall be 7.5 amps and 35,496 Lm
- Quantity of two adjustable, round workup lights; Shall be .83 amps and 1,800 Lm
- Quantity of two livewell lights rated at 290mA and 800 Lm each
- Quantity of two backup lights rated at 1.7 amps and 3,200 Lm each
- Quantity of two headlights rated at 1.7 amps and 3,200 Lm each
- Quantity of 11 Interior lights; **Note: interior lighting shall be red to allow for night work**

Battery power shall be supplied by two marine grade, 24 house batteries charged by the generator. The outboard motor shall have an independent 24 house battery charged by the motor. Batteries shall be kept isolated. There shall be a battery storage compartment capable of storing up to two batteries with additional storage for miscellaneous additional items. Battery charging requirements are as follows:

- One powered by the generator, 14VDC @ 40amps
- One powered by 120VAC shore power, 12VDC @ 6amp charger/maintainer
- Outboard motor charger rated at 40 amps, 13.5VDC

Fuel tank shall be a built-in, onboard 2015 EPA marine grade compliant fuel system providing gas for the outboard motor and the generator. Fuel system shall have a marine water separator/filter with a replaceable cartridge and shut-off valves. Fittings at the fuel filter shall allow use of standard six gallon marine tanks to supplement main fuel tanks.

There shall be a bilge pump located in the rear of the boat capable of 1500 GPH with a 1-1/8 inch discharge output. There shall be a switch on the console to allow for manual or automatic usage.

A fire extinguisher shall be supplied.

Generator

Shall be a Kohler Model 5EKD-Low CO, 120V, 60 Hz, Marine grade generator, OR EQUAL. Shall be U.S. Coast Guard and 2011 EPA certified marine grade with custom wound insulated high voltage windings. Shall be water cooled by water pumped through a screened intake in bottom of boat hull. Shall have a heat reflective and sound deadening housing.

Electrofisher, Booms, and Arrays

There shall be a GPP Electrofisher that is fully integrated into the steering and control console, powered by the Kohler generator, and meeting the following requirements:

Conductivity Range	10 to 11,000 μ S/cm
Rated Output Power	7,500W
Rated Output Max. Current	62A
Output Pulse Modes	AC & Pulsed DC
DC Output Peak	0 to 1,000V in 4 steps
AC Output RMS	0 to 700V in 4 steps
Output Pulse Frequency	7.5, 15, 30, 60 & 120Hz
Output Current Metering	AC & DC 0 to 199A
High Voltage Output Indicator	Panel lamp & audio tone

Output and Safety Control	Foot switch & panel switch
Timer Display	0 to 999,999 seconds LCD
Cooling	Air Cooled
12VAC Auxiliary Power	2 @ 500W 42A
Output Connectors	CPC with 15 in cable
Pulsator Weight	36 lb.
Pulsator Dimensions(L x W x H)	20 in x 15 in x 16 in

Insulated Booms and removable electrode arrays shall be mounted at each corner of the bow on rotating clutches. The clutches shall allow for horizontal slippage. Boom elevation and spread shall be adjustable. Electrode arrays shall be medium-duty "spider-style" arrays with six stainless steel electrode droppers capable of being adjusted from twelve to thirty-six inches in diameter. There shall be brass quick connect fittings to allow for connections and removal of electrode arrays.

There shall be a cathode array that is electrically isolated from the boat hull.

Outboard Motor

Honda Model BF150A2X, **NO SUBSTITUTE**

Trailer

Shall be an appropriately sized GVWR, DOT compliant trailer capable of handling the boat and all accessories to include:

- Corrosion resistant welded frame and fenders
- Tandem axle with tandem 10 inch stainless steel surge disc brakes on both axles
- ST-185/80D13C tires with corrosive resistant rims and full size spare and mount
- Full brake, turn signal, and side runner LED lighting
- 4in x 8in x 12 carpeted marine grade plywood with UHMW top slides and 22in high poly coated shock absorbing load guides
- Winch post 310-1616 upgrade